DR Central files

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

Metropolitan Edison Company
Attention: Mr. R. C. Arnold
Vice President
P.O. Box 542
Reading, Pennsylvania

License No. DPR-50
Inspection No. 50-289/74-34

Reference: Your letter dated January 20, 1974
In response to our letter dated December 20, 1974

Gentlemen:

Thank you for informing us of the corrective and preventive actions you documented in response to our correspondence. These actions will be examined during a subsequent inspection of your licensed program.

With respect to Item 4, your response is not considered adequate in that your described program does not appear to meet the requirements of this Technical Specification. As discussed in the telephone conversation between Mr. Brunner of this office and Mr. Arnold on January 31, 1975, this item has been sent to the Office of Inspection and Enforcement, NRC Headquarters, for resolution.

Sincerely,

Paul R. Nelson, Chief
Radiological and Environmental
Protection Branch

cc: J. G. Herbein, Station Superintendent
R. W. Heward, Project Manager, GPUSC

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

UNITED STATES
ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

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METROPOLITAN EDISON COMPANY

ST OFFICE BOX 542 READING, PENNSYLVANIA 19603 TELEPHONE 215 - 929-3601

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January 20, 1975

Mr. Paul R. Nelson, Chief
Radiological and Environmental Protection Branch
Directorate of Regulatory Operations, Region 1
U. S. Atomic Energy Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Nelson:

Docket No. 50-289
Operating License No. DPR-50
Inspection Report 74-34

This letter and the attached enclosure are in response to your inspection report letter of December 31, 1974, concerning Mr. Bores inspection of our Three Mile Island Nuclear Station Unit 1 and the resultant findings of that inspection.

Sincerely,

W. M. Creitz
President

WMC:RSB:tas

Enclosure: Response to Description of Apparent Violation

File: 20.1.1 / 7.7.3.2.1

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ENCLOSURE

Metropolitan Edison Company (Met-Ed)
Three Mile Island Nuclear Station Unit 1 (TMI-1)
Docket No. 50-289
Operating License No. DPR-50
Inspection No. 50-289/74-34

Response to Description of Apparent Violations

Apparent Violation 1

No response required.

Apparent Violation 2

No response required.

Apparent Violation 3

No response required.

Apparent Violation 4

"Section 4.1.1.A of Appendix B, Technical Specifications requires, in part, that fish sampled as part of the fish impingement study be counted, weighed and identified to the lowest feasible taxon.

Contrary to this requirement, the total weight of all fish from each identified taxon was determined, rather than the individual fish weights."

Response

The TMI-1 Technical Specification for impingement of fish at the unit intake structure requires counting, weighing, and identification to the lowest feasible taxon. The program conducted by Met-Ed and our consultant meets the intent of this technical specification.

The numbers and biomass of the fish impinged were very low compared to the fish population in the vicinity of TMI:

1. The results of 21 impingement surveys (Feb.-Dec., 1974) show a total of 1222 fish of 25 species impinged. These fish weighed a total of 1930.1 g (4.3 lbs) and were primarily young or juvenile.

2. The greatest number and weight of fishes per 24-hour sampling period were, respectively, 316 specimens and 668.3 g.

3. The mean number of fish impinged per 24-hour sampling period was 58 fish with a mean weight of 91.9 g.

The majority of impinged specimens were young or juvenile and thus weighed less than one gram, individually.

The consultant's procedure for weighing impinged fishes has been to weigh all whole species together to the accuracy of 0.1 g. This procedure was determined to meet the intent of the technical specification as a result of the professional judgement of the parties involved. If larger specimens had been observed, a subsample program would have been initiated.

As water weight is an appreciable portion of the weight of small fish, the additional handling required to weigh individual fish could increase the chance for variation.

The lengths of individual fish are taken, therefore the size of impinged fish can be determined from the lenth/frequency and intervals.

Apparent Violation 5

"Section 4.4c and Table 3 of Appendix B, Technical Specifications requires, in part, that milk be analyzed for I-131 within eight days of sampling and with sufficient sensitivity such that 0.5 picocuries of I-131/liter of milk can be determined at the time of sampling within an overall analytical level of ± 25% at the one sigma confidence level.

Contrary to these requirements, in several instances the analyses were not performed within eight days of sampling and/or the sensitivity of analysis was not sufficient to determine 0.5 picocuries/liter I-131 in milk within ± 25% overall analytical level."

Response

a. In one occasion, a milk sample (TM-M-4B1) was analyzed 11 days from the date of sampling. This was due to a laboratory error resulting from problems during computerization of laboratory scheduling. However, samples in excess of those required by the Technical Specifications were collected and one in the same area as the 4B1 sample was analyzed within the eight-day period.

   Met-Ed has taken steps to improve the management communication for the radiological environmental monitoring program through its Generation Engineering corporate technical support staff (see Inspection Report, Details, 3.) As a direct result of this step, the radiological environmental monitoring program sample collection procedure has been modified. If a milk sample is not analyzed within eight days, the sample collector will be instructed by Met-Ed to resample one week later.

   Full compliance has been achieved.

b. On one occasion, a milk sample (TM-M-7B2) which had spoiled provided a reduced iodine yield of 13% rather than the normal 70-80% which resulted in a sensitivity less than 0.5 picocuries/liter. Met-Ed's consultant approved a revised milk laboratory analysis procedure shortly after the occurrence which provides the required sensitivity for spoiled milk samples. In addition, the sample collector was directed to refrigerate milk samples to further reduce the likelihood of recurrence.

   It should be noted that despite the spoiling and resultant low yield, a sensitivity of equal to 0.87 picocuries/liter was

obtained. Further, sampling for this period was in excess of Technical Specification requirements.

Full compliance has been achieved.

c. On several occasions, the error associated with milk analysis has exceeded ± 25% (one sigma confidence level) when sensitivities greater than 0.5 picocurie/liter were achieved. However, on no occasion has the error exceeded 25% of that associated with levels of 0.5 picocuries/liter or greater.

As Technical Specification 4.4c clearly requires 25% with "activity levels at or above 0.5 picocurie per liter," Met-Ed does not consider an extrapolation of the error associated with increased sensitivities to be valid. For these reasons, both the definition and intent of the technical specifications have been met.